2.0 PROPOSED ACTION

2.1 PROPOSED FACILITIES

The Rockaway Project would consist of two components: a 26-inch-diameter natural gas pipeline and associated facilities, and an M&R facility with associated equipment. The Northeast Connector Project would consist of modifications at three existing compressor stations along Transco's existing pipeline system. Overview maps depicting the locations of these facilities are provided on Figures 1-1 and 1-2. Detailed maps showing the pipeline route, M&R facility site, access roads, a pipe yard, and the existing compressor stations, are provided in the figures referenced in the sections below. The non-jurisdictional facilities associated with the Projects are addressed in Section 1.4, Figure 1.4-1, and Appendix B.

2.1.1 Pipeline Facilities

The proposed Rockaway Project pipeline facilities would include:

- approximately 3.2 miles of new 26-inch-diameter pipeline (depicted on the figures with two separate milepost[1] [MP] systems: P0.00 to P0.04 and 0.00 to 3.16) that would deliver natural gas from Transco's existing LNYBL in the Atlantic Ocean to an onshore delivery point with the National Grid system on the Rockaway Peninsula in Queens County, New York;
- a subsea hot-tap[2] (referred to in the figures as a dual hot-tap) in the Atlantic Ocean that would connect the new facilities to Transco's existing LNYBL;
- a subsea manifold in the Atlantic Ocean near the subsea hot-tap that would include valves to isolate gas flows and provide a fitting for Transco to install a temporary launcher during pipeline operations; the launcher would be used to insert an internal inspection tool known as a pig[3] into the pipeline to confirm its integrity and identify any needs for corrective repairs; and
- a cathodic protection system[4] consisting of an offshore anode bed and anode sled connected by a cable to an onshore rectifier to be built on the Rockaway Peninsula by National Grid as part of its BQI Project; the offshore anode bed would consist of about 1,200 feet of anode cable installed perpendicular to the pipeline and terminating at the anode sled.

The portion of the pipeline that is located offshore would cross submerged lands owned by New York State and the NPS. The part of the pipeline that is located onshore would mostly be located under Jacob Riis Park, which is part of the GNRA and is managed by the NPS. At its very northern end, the pipeline would be located on property owned by the Triborough Bridge and Tunnel Authority (TBTA) north of Fort Tildon and south of the Marine Parkway Bridge interchange. The subsea hot-tap assembly, subsea manifold, and anode bed/sled would be located on submerged lands owned by New York State. Following construction, Transco would own and operate all of the proposed pipeline facilities. The locations of the proposed Rockaway Project pipeline facilities are shown on Figures 2.1.1-1, 2.1.1-2a, and 2.1.1-2b.

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1 Pipeline companies designate MPs along their pipeline systems as reference points to help describe the relative location of facilities or resources. The distance between two sequential MPs can but does not always equal one mile (i.e., 5,280 feet).

2 Hot-tapping is the method of making a connection to an existing pipeline without interrupting or emptying the existing pipeline. This means that the existing pipeline can continue to operate while modifications are conducted.

3 A pig is an internal tool that can be used to clean and dry the pipeline and/or inspect the pipeline for damage.

4 A cathodic protection system employs a low voltage current through a steel pipeline to prevent corrosion of the pipe.

Figure 2.1.1-1
Rockaway Delivery Lateral
and Northeast Connector Projects
Location of Rockaway Delivery Lateral Project Facilities

Figure 2.1.1-2a
Rockaway Delivery Lateral and Northeast Connector Projects
Pipeline Facilities for the Rockaway Delivery Lateral

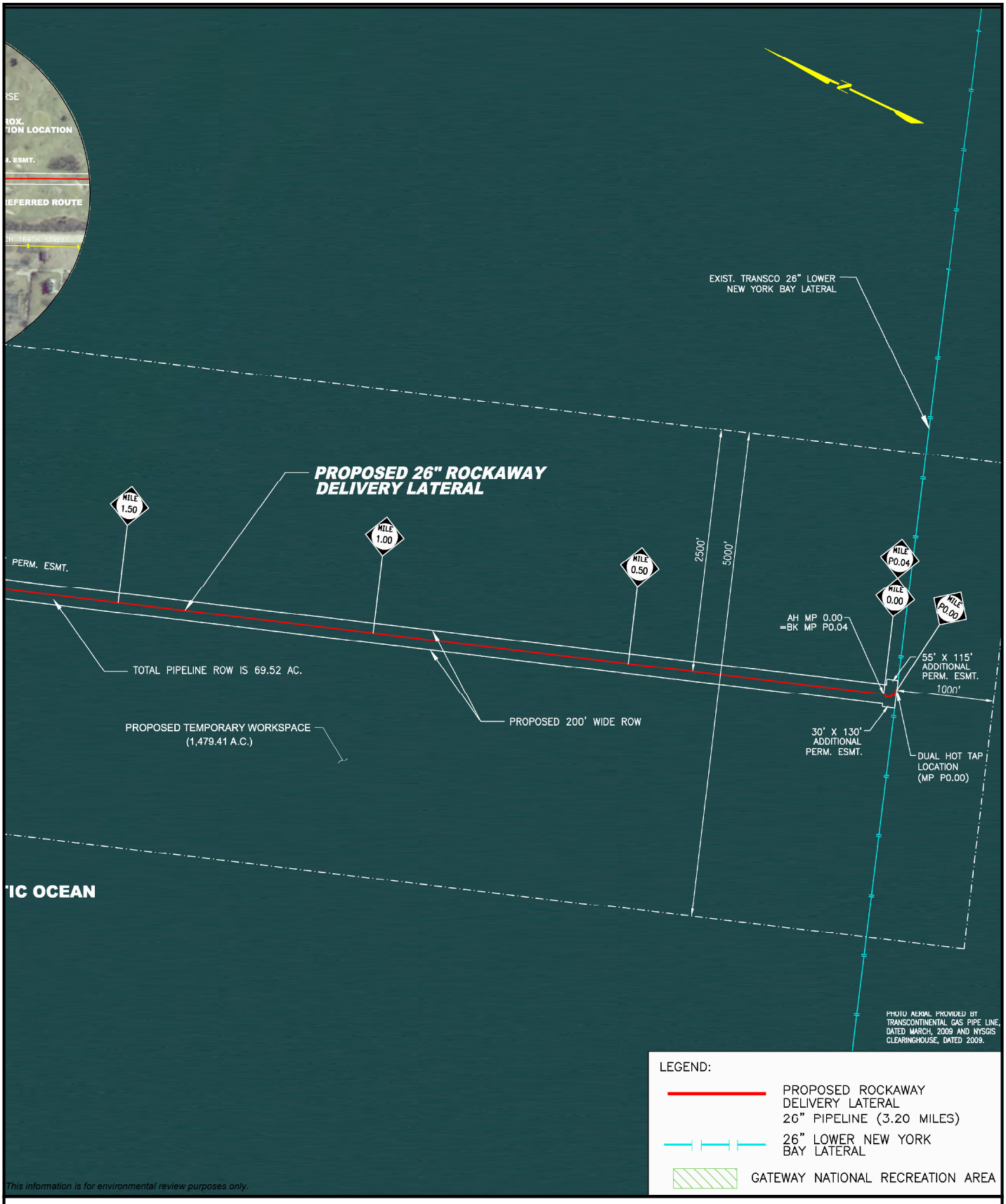

Figure 2.1.1-2b
Rockaway Delivery Lateral and Northeast Connector Projects
Pipeline Facilities for the Rockaway Delivery Lateral

2.1.2 M&R Facility

As part of the Rockaway Project, Transco is proposing to construct and operate a new M&R facility inside the southernmost historic airplane hangar complex at Floyd Bennett Field, designated as Hangars 1 and 2, in Kings County, New York (see Figure 2.1.1-1). Floyd Bennett Field is part of the GNRA, which is managed by the NPS. The M&R facility would include:

- an aboveground launcher and receiver for inserting and removing cleaning and inspection pigs;
- meters and regulator facilities to measure and regulate the flow of gas;
- heating units to warm the gas to meet National Grid's delivery requirements; and
- inlet and outlet pipes, consisting of a 26-inch-diameter inlet pipe and 8-, 12-, and 30-inch-diameter outlet pipes, to connect the M&R facility to National Grid's pipeline along Flatbush Avenue.

Transco is proposing to adaptively reuse the existing historic airplane hangars to accommodate the M&R facility, while also achieving an exterior appearance that would enhance the visual characteristics of the Floyd Bennett Field Historic District. Rehabilitation of the hangar complex would be done in accordance with a building design utilizing materials, fixtures, and operational systems approved by the NPS, FERC, and New York State Historic Preservation Office (SHPO).

2.1.3 Compressor Stations

For the Northeast Connector Project, Transco proposes to modify three existing compressor stations to provide additional natural gas transportation service on its existing pipeline system (see Figures 2.1.3-1, 2.1.3-2 and 2.1.3-3). Specifically, Transco proposes to:

1. add an incremental 6,540 horsepower (hp) of compression at its existing Compressor Station 195 in York County, Pennsylvania by replacing three existing natural gas-fired reciprocating engines and appurtenant facilities with two new electric motor drives; modifying the existing compressor units to be driven by the new electric motors; modifying station piping and valves; and installing a new 35-kV substation, variable frequency drive building, and associated coolers;
2. add an incremental 5,000 hp of compression at its existing Compressor Station 205 in Mercer County, New Jersey by uprating two existing electric motor drives and modifying the associated compressor units; and
3. add an incremental 5,400 hp of compression at its existing Compressor Station 207 in Middlesex County, New Jersey by uprating two existing electric motor drives and modifying associated gearboxes.

The modifications to the compressor stations would result in the net addition of 16,940 hp of compression on Transco's existing system. This would allow Transco to deliver an additional 100 Mdth/d of new incremental natural gas supply to National Grid via the interconnection between the existing LNYBL and the proposed Rockaway Project. The modifications would occur on lands owned by Transco within the existing compressor station sites.

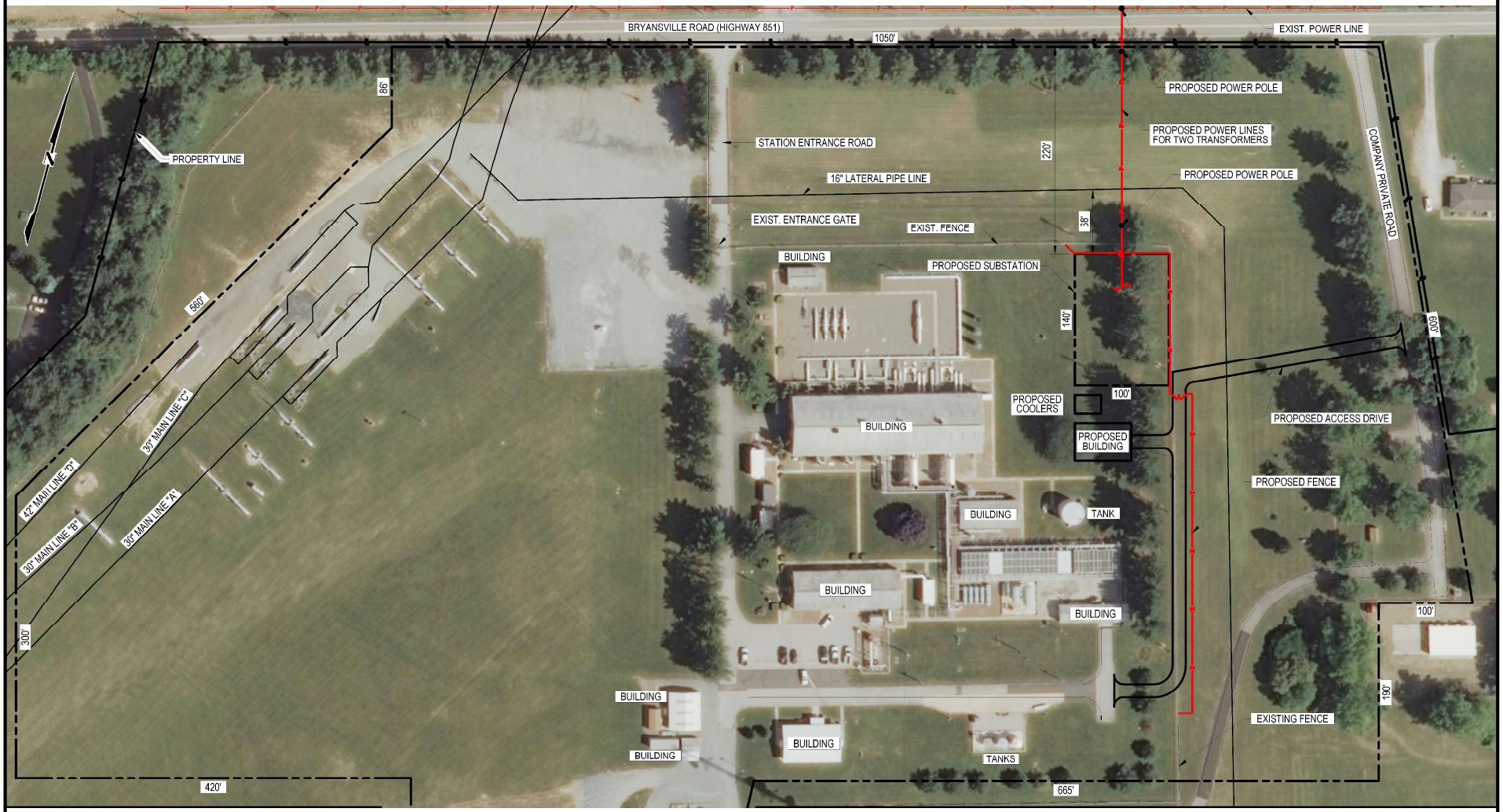

Figure 2.1.3-1
Rockaway Delivery Lateral
and Northeast Connector Projects
An Overview of Compressor Station 195
for the Northeast Connector Project

Figure 2.1.3-2
Rockaway Delivery Lateral
and Northeast Connector Projects
An Overview of Compressor Station 205
for the Northeast Connector Project

Figure 2.1.3-3
Rockaway Delivery Lateral
and Northeast Connector Projects
An Overview of Compressor Station 207
for the Northeast Connector Project

2.2 LAND REQUIREMENTS

Transco proposes to use about 1,567.0 acres of onshore land and offshore ocean areas to construct the Rockaway Project. This includes the construction right-of-way and temporary workspaces for the pipeline, subsea hot-tap and manifold, cathodic protection system, and M&R facility, as well as access roads, marine vessel work areas in the ocean, and a pipe yard at an existing commercial/industrial site in Elizabeth, New Jersey. For the Northeast Connector Project, Transco proposes to use about 25.2 acres of land within the existing yard at Compressor Station 195 for construction of new facilities and temporary workspace. Construction activities at Compressor Stations 205 and 207 would occur within the existing compressor buildings at these sites and would not disturb any land.

Operation of the Rockaway Project would require 64.1 acres of new permanent right-of-way for the pipeline (including the subsea hot-tap and manifold), 5.4 acres of new permanent right-of-way for the cathodic protection system, and 2.0 acres for the M&R facility. Transco would acquire easements and/or lease agreements for the property where its facilities would be constructed but would not purchase any land in fee. No additional land would be required for operation of the Northeast Connector Project.

The specific land requirements for the pipeline and associated facilities, M&R facility, pipe yard, access roads, and compressor stations are described in Sections 2.2.1 through 2.2.5 below. A more detailed description of the land use requirements for the Projects is presented in Section 4.8.1. If the Projects are approved, Transco's construction and operational work areas would be limited to those described in the final EIS and any subsequent Commission authorizations.

2.2.1 Pipeline Right-of-Way

Transco would use a 5,000-foot-wide by approximately 13,470-foot-long temporary work area in the ocean during construction of the offshore portion of the Rockaway Project. Of this approximately 1,546.9-acre area, Transco estimates that 38.0 acres of direct seabed impact[5] would occur during construction. Areas beyond this 38.0-acre area would be indirectly affected by the suspension and re-deposition of sediment disturbed by the offshore construction activities. Additional discussion of these indirect impacts is included in Sections 4.3.2.3 and 4.6.3.2. Onshore construction workspace for the pipeline, not including access roads, which are discussed in Section 2.2.4, would be limited to the 0.7-acre area immediately surrounding the horizontal directional drill (HDD) entry pit, and two narrow corridors parallel to the pipeline across Jacob Riis Park, totaling 1.3 acres, for HDD tracking wires. Figures 2.1.1-2a, 2.1.1-2b, and 2.2.1-1 show the proposed construction workspace for the pipeline.

Following construction, Transco would retain a permanent easement over the pipeline totaling 64.1 acres. Specifically, Transco proposes a 200-foot-wide permanent right-of-way for the offshore pipeline (including the subsea hot-tap and manifold) between the connection with the existing LNYBL and MP 2.43, which is the point along the HDD where the pipeline would reach a depth of about 80 feet below the seabed. The area within the permanent easement would be used as workspace to access the offshore pipeline in the event that future maintenance is required. Between MP 2.43 and the northern end of the pipeline where it would connect with the National Grid system on TBTA property, Transco proposes to retain a 50-foot-wide permanent right-of-way easement for monitoring the area and preventing encroachment over the pipeline by other utilities or structures. It would also help ensure that any future utilities are installed at least 25 feet away from the pipeline alignment. About 3.4 acres of the permanent easement would be on NPS land within the GNRA.[6] Most of the rest of the permanent easement would be on submerged lands owned by New York State.

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[5] This includes the area for offshore trenching, subsea hot-tap and manifold, pipe laydown, cable crossings, anchor footprints, anchor cable sweeps, lift legs for the jack-up barge, HDD exit pit, and anode sled and cable.

[6] The easement on NPS lands would be based on a 10-year, renewable, lease agreement.

Figure 2.2.1-1
Rockaway Delivery Lateral
and Northeast Connector Projects
Onshore Pipeline Workspace for the
Rockaway Delivery Lateral

Transco would maintain a 200-foot-wide permanent easement over the offshore anode bed/sled for the cathodic protection system. An anode cable would be installed within the bed perpendicular to the pipeline in the area adjacent to the HDD exit pit on submerged lands owned by New York State. The anode sled would be installed at the end of the anode bed as shown in Figure 2.1.1-2a. The cable connection from the anode bed to an onshore rectifier would be installed within the pipeline right-of-way between the HDD exit pit and tie-in to the National Grid system on TBTA property.

2.2.2 M&R Facility

Not including access roads, Transco proposes to use 5.5 acres of paved surfaces to construct the M&R facility for the Rockaway Project at Floyd Bennett Field and the outlet and inlet pipes that would connect the M&R facility to National Grid's pipeline along Flatbush Avenue. The location of this proposed workspace is shown on Figure 2.2.2-1. The M&R facility would be housed entirely within the two hangars, which would be leased from the NPS to operate the facility. Transco proposes to retain a 56-foot-wide permanent right-of-way easement for the 30-inch-diameter outlet pipe and a shared 60-foot-wide permanent right-of-way easement for the 8-inch-diameter and 12-inch-diameter outlet pipes and 26-inch-diameter inlet pipe on NPS property. Combined, the permanent lease/easements for these facilities would total 2.0 acres.

2.2.3 Compressor Stations

The Northeast Connector Project would entail modifications at three existing compressor stations. The modifications proposed for Compressor Stations 205 and 207 would be confined to the existing compressor buildings at these sites. The modifications proposed for Compressor Station 195 would occur both within and outside the existing compressor building. Construction activities at Compressor Station 195 would affect a total of approximately 25.2 acres of land within the existing station yard.

2.2.4 Pipe Yard

Transco would temporarily use one 5.0-acre pipe yard (for storage of pipe and equipment) to construct the Rockaway Project. Transco proposes to lease space for the pipe yard from Construction and Marine Equipment (C&ME), located at 330 South Front Street, Elizabeth, New Jersey (Figure 2.2.4-1). The C&ME site has direct barge access along the Arthur Kill waterway and land access via South Front Street. Pipe would be transported from the pipe yard to the work site via barges and tugs using designated navigation channels and open water areas off the Rockaway Peninsula (see the pipe transport route figures in Appendix C). No pipe storage or contractor yards would be required for the Northeast Connector Project; instead Transco would use the existing compressor station sites for equipment and materials storage during construction.

2.2.5 Access Roads

Transco would use a total of 7.6 acres of existing public roads to access the proposed Rockaway Project facilities from other public roadways. About 7.1 acres of these access roads would be used for the M&R facility, and 0.5 acre would be used for the pipeline. No new access roads would be constructed for the Rockaway Project. Transco would utilize existing roads to access each of the compressor station properties during construction of the Northeast Connector Project. Transco would construct one new permanent access road within Compressor Station 195 to connect the new substation with other existing roads at the site.

Figure 2.2.2-1
Rockaway Delivery Lateral
and Northeast Connector Projects
M&R Facility Workspace for the
Rockaway Project

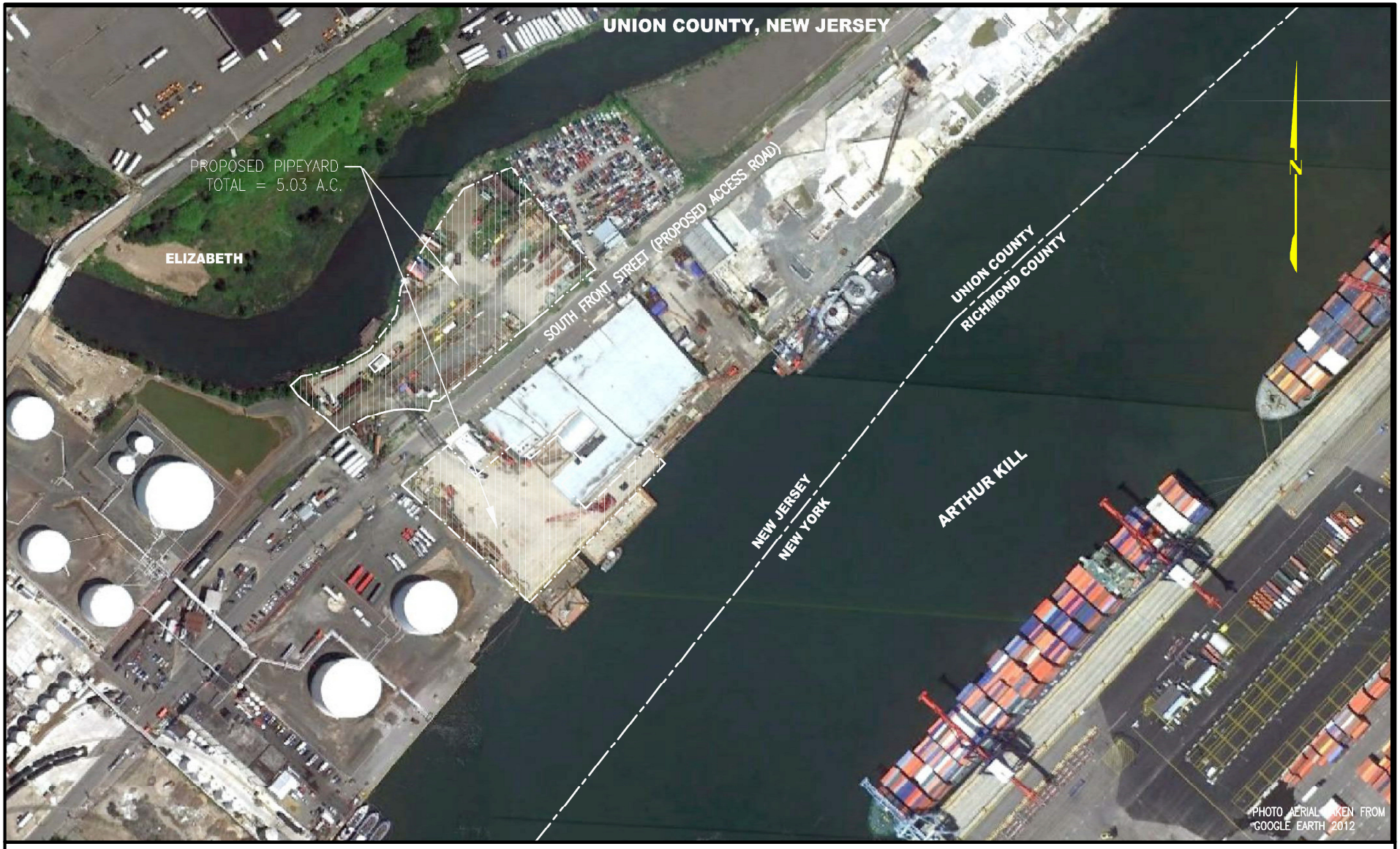


Figure 2.2.4-1
Rockaway Delivery Lateral
and Northeast Connector Projects
Pipe Yard for the Rockaway Project

2.3 CONSTRUCTION PROCEDURES

The Projects would be designed, constructed, tested, operated, and maintained in accordance with the U.S. Department of Transportation's (DOT's) regulations in 49 CFR 92, *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*, and other applicable federal and state regulations.

To reduce impacts during construction of the Rockaway Project, Transco would implement its *Project-Specific Erosion Control, Revegetation, and Maintenance Plan* (Transco Plan) and *Project-Specific Wetland and Waterbody Construction and Mitigation Procedures* (Transco Procedures) (see Appendices D and E). These are based on the mitigation measures described in the FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan* (FERC Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (FERC Procedures)[7] as well as guidelines from the USACE and U.S. Fish and Wildlife Service (FWS). We have reviewed Transco's Plan and Procedures, found them to be acceptable, and have determined that adherence to the requirements of these plans would reduce the impacts of the Rockaway Project. Transco would implement the mitigation measures identified in the FERC Plan to reduce the impacts of the Northeast Connector Project at Compressor Station 195. The requirements of Transco's Plan and Procedures and the FERC Plan are discussed in more detail in Sections 4.2.3 and 4.4.4.

To avoid or minimize the potential for harmful spills and leaks during construction, Transco developed a *Spill Prevention, Control, and Countermeasures Plan* (SPCC Plan) for the Rockaway Project (see Appendix F), and a *Construction Spill Plan for Oil and Hazardous Materials* (Construction Spill Plan) for each of the Projects (see Appendix G). These plans describe spill and leak preparedness and prevention practices, procedures for emergency preparedness and incident response, and training requirements. Transco also prepared a *Horizontal Directional Drilling* (HDD) *Operations Monitoring and Contingency Plan* (HDD Monitoring and Contingency Plan) (see Appendix H), which describes the measures that would be implemented during the HDD operation to prevent and respond to an unplanned or inadvertent release of drilling fluid (also known as a frac-out) or in the event of a drill failure.

2.3.1 Pipeline Construction Procedures

The Rockaway Project would involve the construction of 2.84 miles of offshore pipeline and 0.36 mile of onshore pipeline and would require the use of both offshore and onshore pipeline construction methods. The offshore and onshore construction methods would include the use of:

- a pipe lay barge to fabricate the offshore segment of the pipeline and lay it on the seabed;
- a jet sled to excavate seabed sediments and lower the offshore segment of the pipeline into a trench;

[7] The FERC Plan and Procedures are a set of construction and mitigation measures developed in collaboration with other federal and state agencies and the natural gas pipeline industry to minimize the potential environmental impacts of the construction of pipeline projects in general. The FERC Plan can be viewed on the FERC Internet website at http://www.ferc.gov/industries/gas/enviro/plan.pdf. The FERC Procedures can be viewed on the FERC Internet website at http://www.ferc.gov/industries/gas/enviro/procedures.pdf.

- hand jetting to excavate the seabed in the area of the subsea hot-tap and manifold, at offshore cable crossings, and along the anode bed for the cathodic protection system;

- an HDD to install the pipeline from about 0.7 mile offshore to the tie-in with the National Grid system on the Rockaway Peninsula;

- dredging and pile driving in the vicinity of the offshore HDD exit pit; and

- upland construction techniques to excavate soil at the HDD entry pit and connect Transco's pipeline to National Grid's pipeline on the Rockaway Peninsula.

2.3.1.1 Offshore Construction Vessels

The offshore construction for the Rockaway Project would require the use of several different types of vessels. The primary vessels would consist of a pipe lay barge, a jack-up barge, a clamshell barge, two pipe transport barges, and a dive support vessel. Figure 2.3.1-1 illustrates the offshore construction spread and anchoring method for these vessels. Other vessels would be used to support the construction effort, including seven standard and two anchor-handling tug boats (tugs), two crew boats, two escort boats, a fuel barge, and a survey vessel. Descriptions of the vessels are included below.

Pipe Lay Barge

A pipe lay barge is a large ocean-going vessel that would be used for several activities, including assembling and laying the pipeline on the seabed, installing the subsea hot-tap and manifold, towing the jet sled to excavate the pipeline trench, hydrostatic testing the pipeline, and installing the HDD segment of the pipeline. A more detailed description of these activities is presented in the sections that follow. The pipe lay barge would be positioned and held in place using an eight-point mooring system of wire ropes and anchors.[8] The wire ropes would be equipped with mid-line buoys to keep the wire ropes off of the seafloor. This anchoring system would be used to move the barge by reeling the anchors in or out. When the barge progresses to the end of the mooring lines and has no more line to reel in, anchor-handling tugs would be used to move the anchors to a new position ahead of the barge. Figure 2.3.1-2 shows a pipe lay barge during a pipe-lay operation while the pipe joints are being unloaded.

Jack-up Barge

A jack-up barge equipped with cranes and other heavy equipment (e.g., drilling tools, drill pipe, and other equipment) would assist the HDD operations, and may be used to install and remove the goal posts and fender piles associated with the HDD. A more detailed description of these activities is presented in the sections that follow. The jack-up barge would be positioned using lift legs that press against the seafloor to support lifting the vessel above the water's surface. Figure 2.3.1-3 shows a typical jack-up barge. Figure 2.3.1-1 illustrates the typical positioning and anchoring of the jack-up barge relative to the pipeline.

[8] Mooring/anchoring of vessels would occur within the 5,000-foot-wide by approximately 13,470-foot-long offshore temporary work area as described in Section 2.2.1.

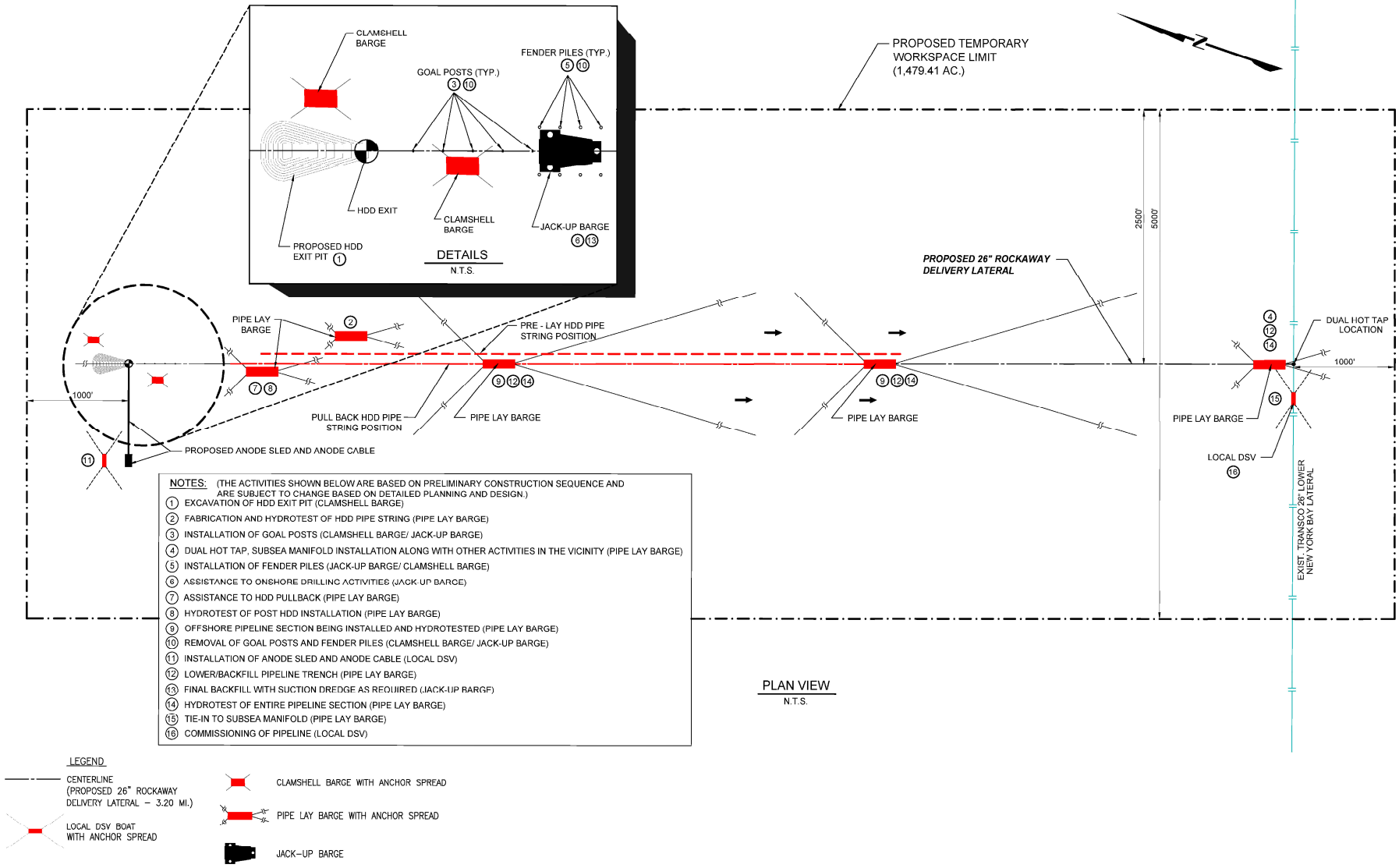


Figure 2.3.1-1

Rockaway Delivery Lateral and Northeast Connector Projects

Typical Offshore Construction Vessel Positioning for the Rockaway Delivery Lateral

Figure 2.3.1-2 Typical Pipe Lay Barge and Pipe Transport Barge

Figure 2.3.1-3 Typical Jack-up Barge

Clamshell Barge

A clamshell barge would be used to excavate a pit at the HDD exit point and may be used as an alternative to the jack-up barge to install and remove the goal posts and fender piles associated with the HDD. A more detailed description of these activities is presented in the sections that follow. The clamshell barge would be equipped with a clamshell attached to a crawler excavator, survey equipment, an echo sounder (for excavation monitoring), and other equipment needed to support dredging activities. Mooring for the clamshell barge would consist of three or four anchors placed at pre-selected locations by a support tug. Figure 2.3.1-4 shows a typical clamshell barge in operation. Figure 2.3.1-1 illustrates the typical positioning and anchoring of the clamshell barge relative to the pipeline.

Figure 2.3.1-4 Typical Clamshell Barge in Operation

Pipe Transport and Fuel Barges

Two pipe transport barges would be used to move pipe joints from the pipe yard to the pipe lay barge during pipe-laying operations. The pipe transport barges would be rafted beside the pipe lay barge during unloading. One fuel barge would be used to service the offshore vessels and other equipment during construction.

Dive Support Vessel

A dive support vessel would be used where diving operations and subsea construction are required. A dive support vessel would also be used for pre-commissioning and commissioning activities.[9] A typical dive support vessel would have a suitable deck for diving and construction equipment (e.g., cranes, air compressors, and pumps) and may include facilities for pipe welding and other construction activities. The vessel would have living and dining accommodations for crew and construction staff. Mooring for a typical dive support vessel would consist of three or four anchors placed at pre-selected locations either by the dive support vessel or by a support tug.

[9] Pre-commissioning refers to activities that are carried out on the pipeline before the final product is introduced into the pipeline. Commissioning is the process of filling the pipeline with natural gas so it can begin operation.

Standard and Anchor-Handling Tugs

Standard tugs would be used to tow the pipe transport barge between the pipe yard and pipe-laying operation, tow the fuel barge to the offshore construction area, and assist in moving and positioning other vessels. Anchor-handling tugs would be responsible for placing, retrieving, and repositioning anchors and anchor lines during pipe-laying and pipe installation activities. These tugs, which are specifically designed and constructed for this purpose, are generally more powerful and maneuverable and have greater lifting capacity than standard tugs.

Crew Boats

Two general-purpose vessels would be chartered locally to carry personnel and service the construction vessels as needed. When away from the dock and inactive, the crew boats would be rafted to construction vessels.

Escort Boats

Two escort boats, which could be similar to harbor pilot boats, would keep other vessels aware of the movements of the pipe lay barge and other construction vessels. If a vessel not related to the Rockaway Project enters the construction area, an escort boat would approach the vessel and ensure its safe passage out of the construction area.

Survey Vessel

A survey vessel would verify bottom features in advance of, concurrent with, and following pipe-laying activities. The vessel would be equipped with a differential global positioning system to pinpoint its location, an echo sounder, side-scan sonar, magnetometer, and pipeline- and cable-locating equipment.

2.3.1.2 Pipe Delivery and Concrete Coating at the Pipe Yard

The pipeline for the Rockaway Delivery Lateral would be fabricated from approximately 450 40-foot-long pipe joints. The pipe joints would be shipped by rail from a pipe mill manufacturer to the proposed pipe yard in Elizabeth, New Jersey. The pipe would arrive with an external coating of fusion-bonded epoxy and an internal coating of liquid epoxy. At the pipe yard, concrete-weight coating would be applied to the pipe joints for the offshore, non-HDD section of the pipeline. The pipe joints for the HDD section would be coated with an abrasive-resistant coating, but would not be concrete coated. The pipe joints would then be shipped by the pipe transport barges and tugs to the offshore pipe lay barge (see the pipe transport route figures in Appendix C).

The subsea hot-tap and manifold would be delivered, pre-made, to the pipe yard in Elizabeth, New Jersey, along with the materials for the cathodic protection system, and shipped by the pipe transport barges and tugs to the offshore construction site.

2.3.1.3 Pipe Fabrication with a Lay Barge

After the pipe joints are brought to the pipe lay barge, the ends of the pipe joints would be aligned and then welded together using multiple passes for a full-penetration weld. The welding would be performed by welders qualified according to applicable American National Standards Institute (ANSI), American Society of Mechanical Engineers (ASME), and American Petroleum Institute (API) standards. The fittings would be manufactured to the ANSI MSS-SP 75, "Specification for High Test, Wrought, Butt Welding Fittings." To ensure weld quality and integrity and that the assembled pipe meets or exceeds the design strength requirements, the welds would be visually inspected and non-destructively tested using radiographic (X-ray) or another approved test method in accordance with API standards. Any welds that

are determined to be defective would be removed or repaired as necessary. All new welds or repairs would be re-inspected and non-destructively tested. Following welding, the previously uncoated ends of the pipe joints would be treated in the field with a company- and industry-approved anti-corrosion coating. Before lowering the pipe, the coating on each pipe section would be inspected and any damaged areas would be repaired.

After several sections of the pipe are welded together and tested on the pipe lay barge, the leading end of the pipeline would be lowered down to the seabed. As the pipeline is being lowered, more joints would be welded on to the end until the entire pipeline is fabricated and resting on the ocean floor.

2.3.1.4 Subsea Trenching with a Post-Lay Jet Sled

The pipeline would then be lowered to a minimum depth of 4 feet below the seabed using a post-lay jet sled. The post-lay jet sled would straddle and be towed along the pipeline by cable or chain from the pipe lay barge, which would provide pressurized water and air for the system. The jet sled would use high-pressure water jets to open a trench under the pipeline. The material loosened by the jets would be expelled by discharge nozzles to the area behind the sled. As the sled is pulled along creating the trench, the pipeline would sink under its own weight and settle on the trench bottom. The configuration of a typical jet sled is shown on Figure 2.3.1-5.

2.3.1.5 Horizontal Directional Drilling

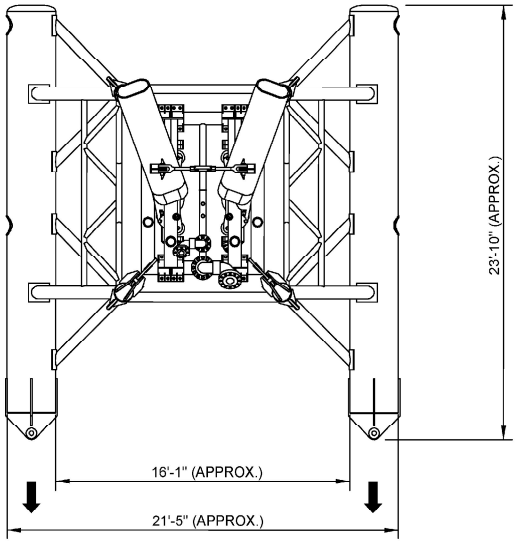
Transco would use the HDD method to minimize impacts on nearshore habitats and avoid impacts on the beach and other areas of Jacob Riis Park. Transco proposes to locate the HDD entry point on TBTA property just north of Jacob Riis Park on the Rockaway Peninsula. The HDD exit point would be located about 3,600 feet or 0.7 mile offshore of the peninsula. As described in more detail below, the HDD operation would be completed in three steps:

- the drilling of a small-diameter pilot hole;
- reaming or enlarging of the pilot hole to a diameter sufficient to accommodate the pipeline; and
- pulling the HDD pipeline segment into the completed drill hole.

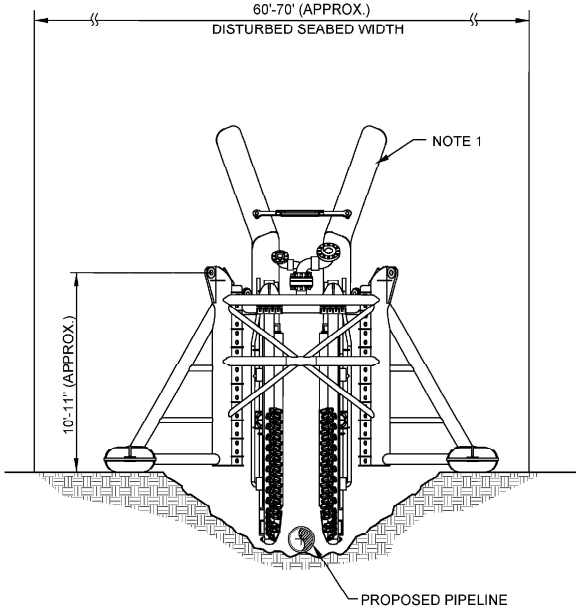
The pipe for the HDD segment would be fabricated on the pipe lay barge as described above, laid on the seafloor within the proposed right-of-way easement, and hydrostatically tested (see the description of hydrostatic testing in Section 2.3.1.11 below) before being pulled through the drill hole.

The proposed HDD construction period would last approximately 8 to 10 weeks. This estimate is based on crews working 12 hours per day during the first phase of the HDD operation (i.e., during the set-up of the equipment and the drilling of the pilot hole), then switching to 24 hours per day during the second phase of the HDD operation (i.e., during the reaming or enlarging of the pilot hole and when the offshore HDD pipeline segment is pulled into the hole and back to the HDD entry point).

The drilling fluid that would be used during the HDD operation to lubricate and facilitate the drilling operation and the removal of cuttings from the drill hole would consist of approximately 95 to 98 percent fresh water and 2 to 5 percent bentonite, which is a naturally occurring, nonhazardous clay mineral. As currently planned, the fresh water would be sourced from fire hydrants located in the vicinity of the onshore entry workspace. The potential for environmental impact due to the HDD drilling fluid is discussed in Sections 4.3.2.3, 4.5.2.1, and 4.6.3.2.



PLAN VIEW
N.T.S.



ELEVATION VIEW
N.T.S.

Figure 2.3.1-5
Rockaway Delivery Lateral
and Northeast Connector Projects
Typical Jet Sled Configuration

In preparation for initiating the pilot hole operation, a clamshell dredge would excavate a pit at the offshore HDD exit point location. The excavated material would be deposited on the seabed adjacent to the exit pit. The pit would provide a ramp and transition area that would be used to connect the end of the HDD segment to the section of the pipeline that is installed using the jet sled. It would also serve to contain the HDD drilling fluid and cuttings that are released at the offshore exit location during the HDD operation. The pit would be able to accommodate approximately 15,300 cubic yards of material.

Around the same time that the offshore exit pit is being dredged (or earlier), HDD equipment, including an HDD drill rig (see Figure 2.3.1-6), would be mobilized to and set up at the onshore HDD entry point location. The drill rig would drill a pilot hole under the shoreline and seabed to the pre-excavated pit at the offshore exit point. Transco would install casing for approximately the first 100 to 200 feet of the drill path on the HDD entry side to contain and facilitate the return of the drilling fluid to the HDD entry location.

Figure 2.3.1-6 Typical HDD Drill Rig

While the drilling of the pilot hole is underway, approximately five sets of steel piles (10 piles total) known as goal posts, probably due to their similarity in appearance to football goal posts, would be installed on the south side of the HDD exit pit to help support the drill pipe during the drilling operation (see Figure 2.3.1-7). Another 60 steel piles, known as fender piles, would be installed to prevent support vessels from accidentally coming into contact with the clamshell or jack-up barge during the HDD operation. All 70 of these piles, consisting of steel pipe measuring 14 to 16 inches in diameter, would be installed using two vibratory hammers. One vibratory hammer would be in the process of positioning while the other is actively hammering.[10] The installation of the piles would be completed in approximately 1 week with about 10 piles driven each day. Transco estimates that it would take approximately 60 seconds of continuous vibratory driving to install each pile. Thus, the total operating time of the vibratory hammer would be less than one day of continuous operation spread over a period of one week.

After the pilot hole is completed, it would be enlarged to a diameter sufficient for the 26-inch-diameter pipeline plus the casing that would be installed at the entry site. The enlargement of the pilot hole would be accomplished by a tool known as a reamer that would be attached to the drill head.

When the enlarged hole is suitable for installation of the HDD pipe segment, the 10 goal post piles would be removed using a vibratory hammer. Approximately 60 seconds of continuous operation of the vibratory hammer spread over a period of one to two days would be required to extract each goal post pile. After the goal posts are removed, the jack-up barge would be moved and the pipe lay barge would be repositioned to support the installation of the HDD pipe segment through the combined effort of the onshore and offshore equipment, which would insert the HDD segment into the offshore HDD exit hole and pull it back to the HDD entry hole (see Figure 2.3.1-8).

[10] According to Transco, the model of vibratory hammers likely to be used for the Rockaway Project is the MKT V 52.

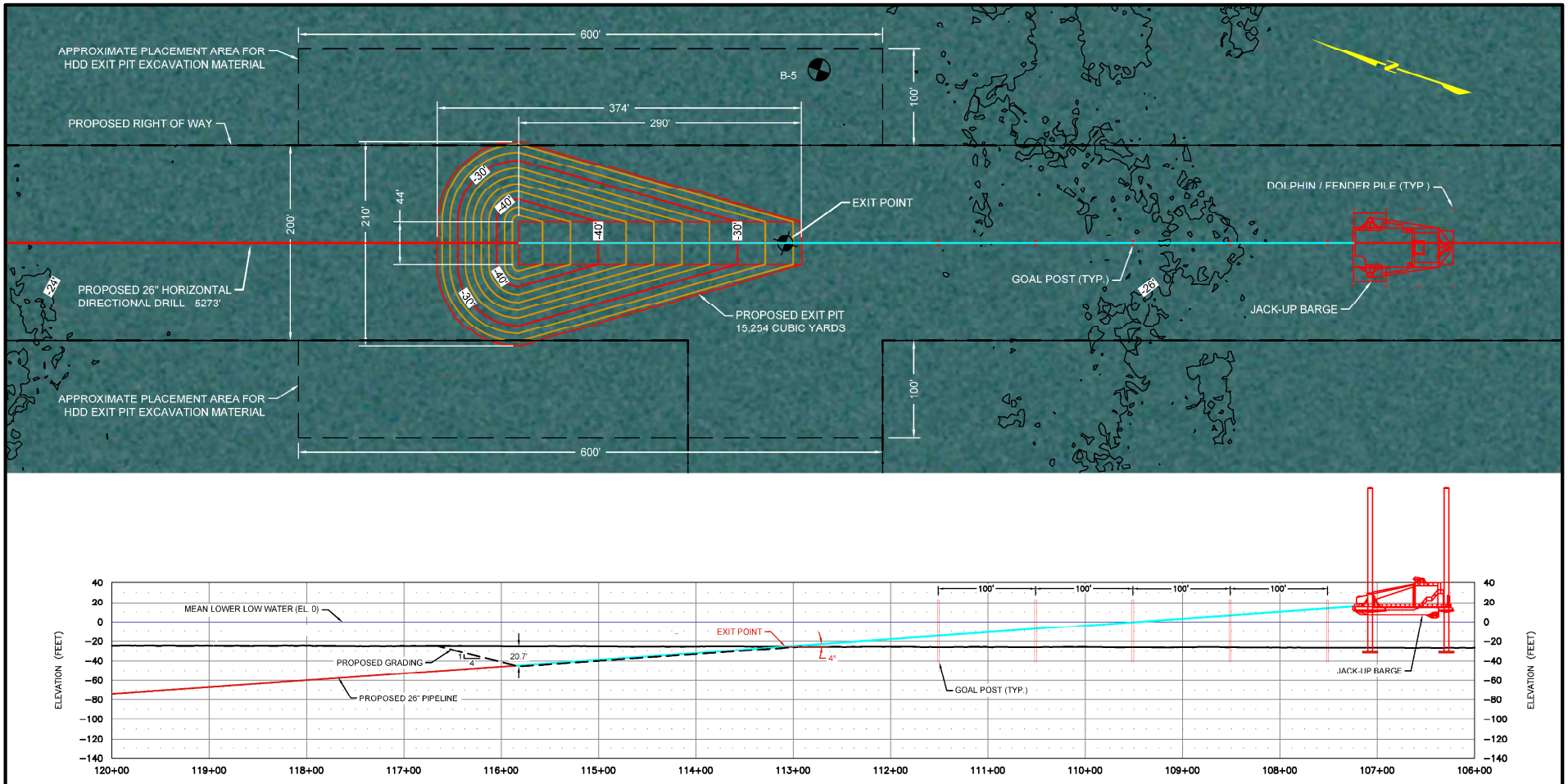


Figure 2.3.1-7
Rockaway Delivery Lateral
and Northeast Connector Projects
HDD Exit Pit and Construction Layout
for the Rockaway Delivery Lateral

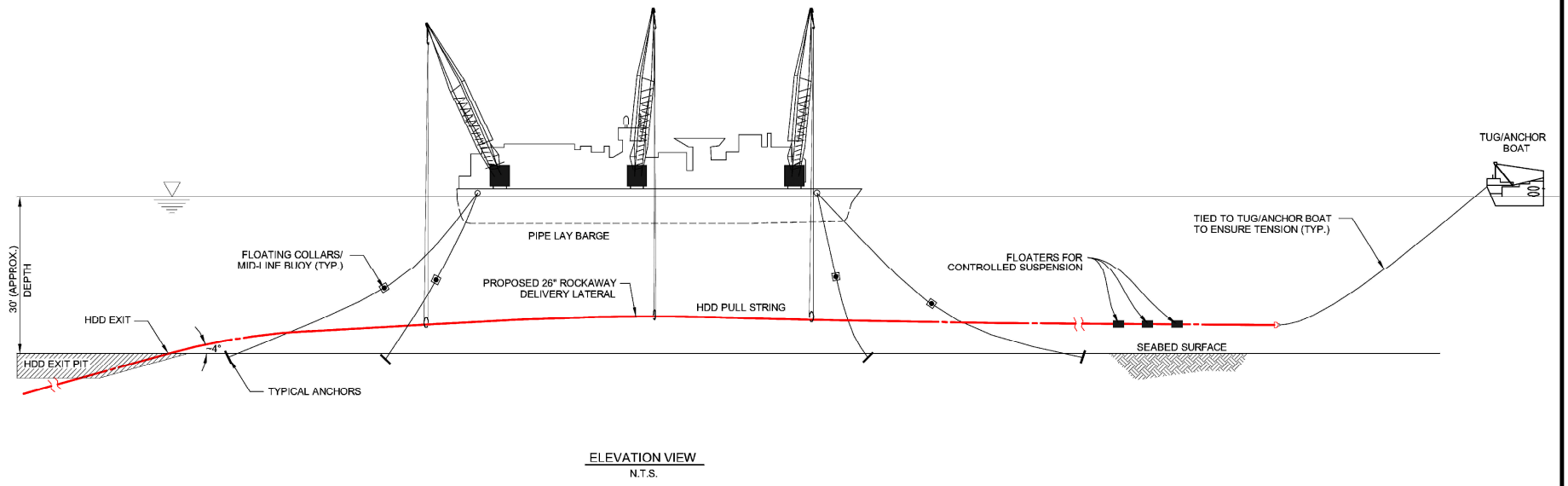


Figure 2.3.1-8
Rockaway Delivery Lateral
and Northeast Connector Projects
HDD Pipeline Pullback (Offshore)
for the Rockaway Delivery Lateral

After the HDD pipe segment is installed and before it is connected to any other sections of pipe, it would be hydrostatically tested a second time (see Section 2.3.1.11 for additional discussion of hydrostatic testing). When this second hydrostatic test is successfully completed, Transco would remove the casing at the onshore entry location and demobilize any remaining HDD equipment.

Following completion of the HDD, the 60 fender piles would be extracted using the vibratory hammer. Transco estimates that removal of the fender piles would be completed in approximately one week with about 10 piles extracted each day. Approximately 60 seconds of continuous operation of the vibratory hammer would be required to extract each pile. The total operating time of the vibratory hammer for the extraction of the fender piles would be less than one day spread over a period of one week.

2.3.1.6 Subsea Cable Crossing

The proposed pipeline would cross one active offshore cable, the Neptune Regional Transmission System (RTS) power cable, and two inactive offshore cables. Transco plans to install the pipeline over these cables in such a way as to provide a minimum of 12 inches of separation between each cable and the pipeline. Installation of the pipeline at each cable crossing would be conducted by hand jetting. Two concrete mats would be placed perpendicular to the proposed pipeline at the base of the trench. The first mat would be level with the cable, and the second mat would be placed on top of the first mat to form a "bridge" over the cable. Transco would ensure 4 feet cover from the top of the pipe at the cable crossings. A schematic drawing of a cable crossing is presented as Figure 2.3.1-9.

Transco developed a preliminary installation plan for the cable crossings and would submit this plan to the owner of the active cable for review and approval before beginning pipeline construction near the crossing. We have added a recommendation in Section 4.8.4.3 that prior to the end of the draft EIS comment period, Transco should file an updated plan showing the finalized pipeline crossings and documentation of the cable owner's concurrence with the plan.

2.3.1.7 Subsea Hot-Tap and Subsea Manifold Installation

Transco would connect the pipeline to the existing LNYBL using a subsea hot-tap (with two hot-tap connections) connected to a subsea manifold. Because of the size and weight of the structures and equipment associated with the subsea hot-tap and manifold, they would be installed by the pipe lay barge. Divers using hand-jetting equipment would excavate the areas for the subsea hot-tap and subsea manifold to a depth of approximately 8 feet below the seabed.

Before making the connection of the hot-tap to the existing pipeline, divers would remove the external concrete coatings from approximately 25 feet of the existing LNYBL. In total, about 2 cubic yards of the concrete coating would be broken up and removed. This material would collect in the excavated area beneath the pipeline. After removing the concrete coating, the divers would remove about a half a cubic yard of the 5/8-inch thick protective coating on the pipeline, which would also collect in the excavated area beneath the pipeline. When the removal of these two coatings is complete, Transco would collect and dispose of recoverable pieces of the broken coatings.

Transco would then lower clamps and attach them to the hot-tap and pipeline. After testing the fittings to ensure proper seals and that the integrity of the LNYBL pipeline is maintained, Transco would complete the taps into the existing pipeline and connect the subsea hot-tap to the subsea manifold. A two-part epoxy coating would then be applied to the 25-foot-long section of the LNYBL to replace the protective coating that is removed to facilitate installation of the hot-tap.

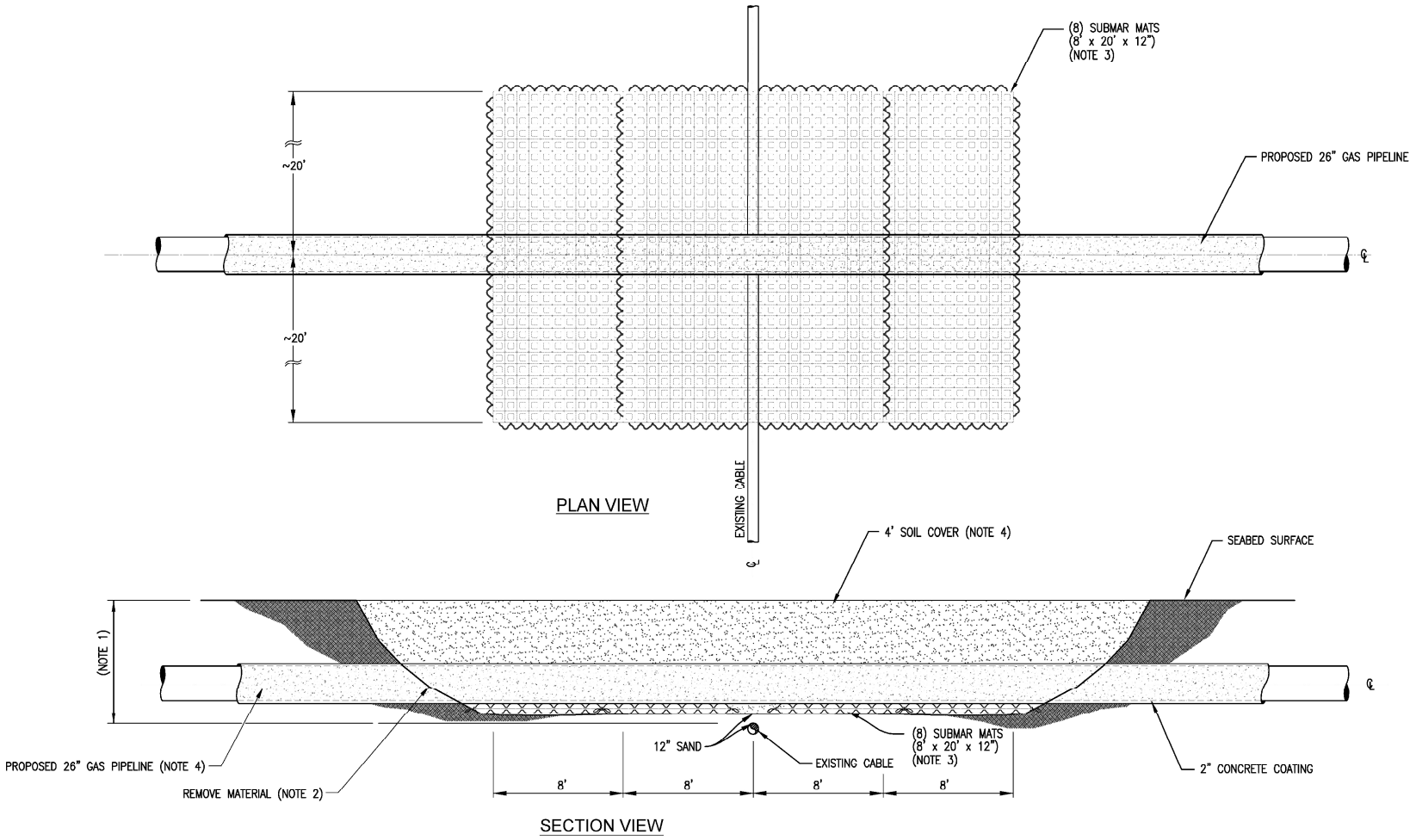


Figure 2.3.1-9
Rockaway Delivery Lateral
and Northeast Connector Projects
Typical Subsea Cable Crossing
for the Rockaway Delivery Lateral

2.3.1.8 Anode Bed and Anode Sled Installation

The anode bed would consist of about 1,200 feet of anode cable installed perpendicular to the pipeline in the vicinity of the HDD exit pit (Figure 2.3.1-10). Divers operating from a dive support vessel would use a hand jet to excavate the anode bed to a depth of about 5 feet below the seafloor. The anode sled, which would consist of a series of metallic rods attached to a corrosion resistant frame, would be installed at the end of the anode cable. Divers would hand jet the area for the anode sled to a depth of about 6 feet below the sea floor. The anode bed then would be connected to the anode cable and lowered into the excavated area.

The cathodic protection system would be connected to the onshore rectifier by an anode cable. The cable would be pulled through the HDD borehole for the pipeline in a non-metallic conduit to the tie-in with the National Grid pipeline system on the Rockaway Peninsula. No additional land would be disturbed by installation of the cable.

2.3.1.9 Offshore Backfilling

Transco initially proposed to allow the offshore excavation areas to infill by natural sedimentation processes rather than backfilling these areas at the time of construction. In response to comments from cooperating and other agencies, Transco modified the proposed action from natural to active backfill. For the pipe trench, Transco would configure the discharge nozzles on the jet sled to expel sediment behind the sled and into the trench. This would minimize the amount of sediment deposited outside of the trench during jetting and provide for immediate backfill of the trench as the pipeline is lowered to a depth sufficient to provide 4 feet of cover. Seabed currents would provide additional natural backfill as sediments migrate across the pipe trench.

Following installation of the pipeline, Transco would conduct a bathymetric survey to document seafloor elevations along the trench. The survey would also include areas where sediments are excavated by hand-jetting methods, such as the subsea hot-tap and manifold and the trench for the cathodic protection system. If the survey identifies any areas where the seafloor has not been restored and/or where 4 feet of cover is not present over the pipeline, Transco would backfill these areas using native sediments or approved compatible materials.

In addition to backfilling the pipe trench, Transco would add a top layer of sediment over the drilling fluid and cuttings that collect within the offshore HDD exit pit both to cap these materials and restore the contours of the seafloor. The required thickness of the top layer would be determined by the USACE as part of its permitting process, though Transco estimates that the layer could range from 4 inches to 2 feet thick. The area of the HDD exit pit would be included in Transco's bathymetric survey to assess conditions along the seabed and identify areas where backfill is required. As with the pipe trench, currents along the seabed would provide additional natural backfill as sediments migrate across the pit.

If the bathymetric survey identifies areas where additional backfill is required, the fill would be obtained from the seafloor in the area immediately adjacent to the trench. The fill would consist of sediment disturbed by the jet sled that settles adjacent to the trench augmented, as necessary, by additional sediment from the seafloor. The fill would be withdrawn from an area estimated to measure 4-feet wide by 1-foot deep. The fill would be withdrawn from the seafloor and discharged to the trench or other offshore excavation area using a suction dredge. The dredge would be lowered from the jack-up barge and pulled along the pipe trench (or other offshore excavation area) to withdraw/discharge sediment. Following the backfill operation, Transco would conduct a second bathymetric survey to verify that the contours of the seafloor have been restored and that 4 feet of cover is present over the pipeline.

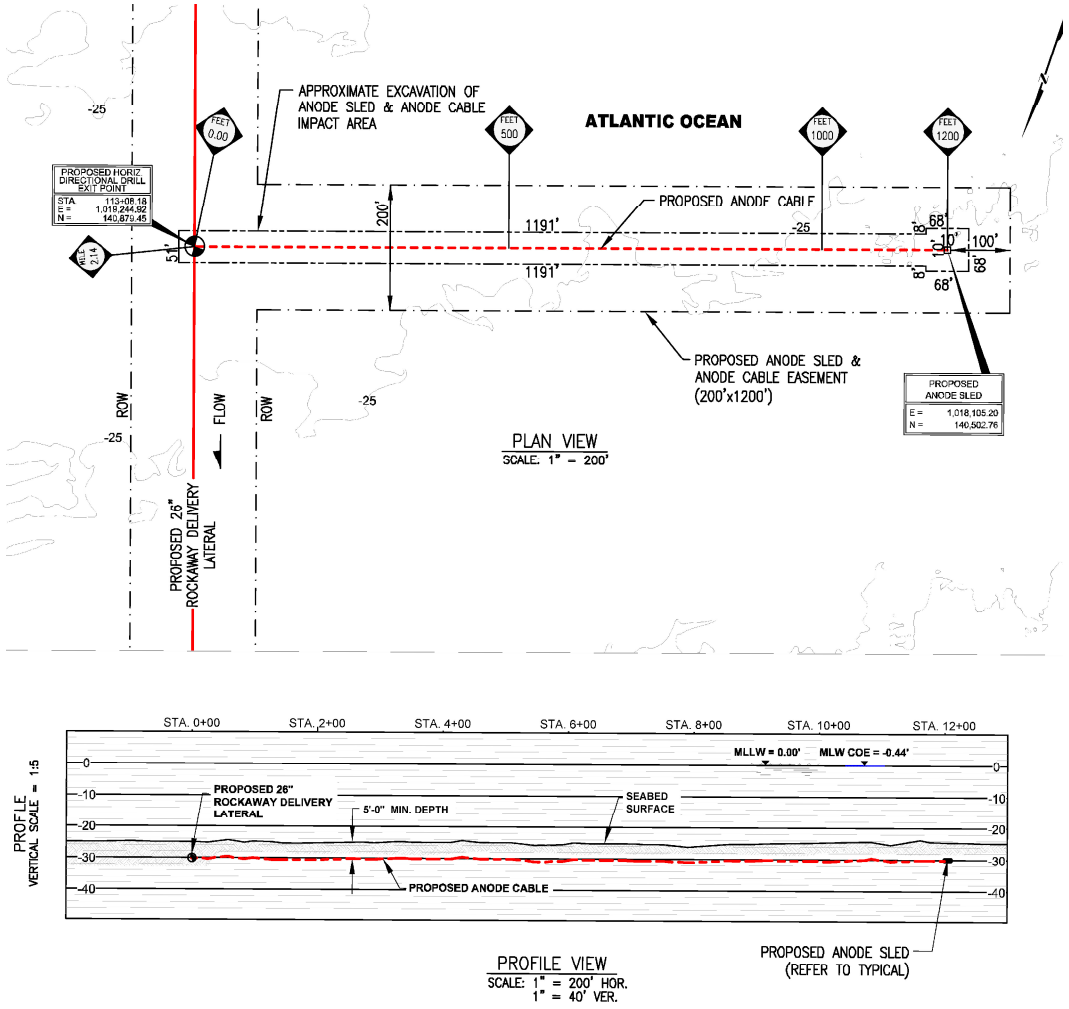


Figure 2.3.1-10

Rockaway Delivery Lateral
and Northeast Connector Projects

Anode Bed and Anode Sled
for the Rockaway Delivery Lateral

2.3.1.10 Onshore Clearing, Grading, Trenching, and Backfilling

Before onshore construction begins, Transco would locate and mark nearby existing utility lines (e.g., cables, conduits, and pipelines) with flags, stakes, or other devices to prevent accidental damage during pipeline construction. Temporary soil erosion and sedimentation control measures would be installed around the edges of the temporary workspace, as applicable, in accordance with Transco's Plan and Procedures. Following installation of the erosion and sedimentation control measures, the construction workspace would be cleared and graded, as needed, to create a level working surface to allow for placement or safe passage of equipment.

The short segment of pipe that would connect the proposed pipeline to National Grid's facilities would be installed after the installation of the HDD segment. The trench for this pipe would be excavated with a track-mounted or rubber-tired backhoe or similar equipment to a depth that would allow at least 3 feet of cover between the top of the pipeline and the surface of the ground. Blasting would not be required for the installation. The bottom of the trench would be excavated at least 12 inches wider than the diameter of the pipe (i.e., about 38 inches for a 26-inch-diameter pipe). The sides of the trench would be sloped for safety, depending on soil characteristics and trench depth. The width of the top of the trench would vary depending on the soil stability and safety risks. On the two ends where it connects with the HDD segment and National Grid pipeline, the excavation would be deeper and the top of the trench may be between 12 and 15 feet across or wider if unstable soils are encountered.

When the trench is complete and has been inspected to ensure that it is free of rock and other debris that could damage the pipe or its coating, the pipe would be lowered into place and covered by a concrete slab measuring 30 inches wide by 8 inches thick. The trench would then be backfilled using the previously excavated spoil, which would be pushed back into the trench using bladed equipment or backhoes. See Figure 2.3.1-11 for a schematic of a typical onshore construction right-of-way.

2.3.1.11 Hydrostatic Testing

The HDD segment would be hydrostatically tested before and after it is installed, and the entire 3.2-mile-long pipeline from the LNYBL to the tie-in with the National Grid pipeline would be hydrostatically tested as one unit following installation of the pipeline to ensure it is capable of operating at the design pressure. Nearly all of the water used for these tests (approximately 573,500 gallons) would be saltwater obtained from the ocean, although a small portion (approximately 5,200 gallons) would be fresh water obtained from a municipal source. The seawater would be withdrawn at a fill rate of approximately 4,000 gallons per minute filtered through a 200-size mesh screen (mesh opening of 0.0029 inch or 0.07 millimeter). An oxygen scavenger and non-oxidizing biocide would be added to the seawater to prevent corrosion of the pipeline interior, and a non-toxic florescent dye would be added to help detect potential leaks. The potential for environmental impact due to these additives is discussed in Section 4.6.3.2.

The water for the hydrostatic test would be pressurized in the pipe in accordance with DOT requirements as set forth in 49 CFR 192 and held for a minimum of 8 hours. Any loss of pressure that cannot be attributed to other factors (e.g., temperature changes) would be investigated. Any leaks that are detected would be repaired, after which the pipeline would be retested. Following the completion of each test the water would be discharged back to the ocean through a multi-port diffuser in accordance with the New York State Department of Environmental Conservation (NYSDEC) hydrostatic test water discharge permit.

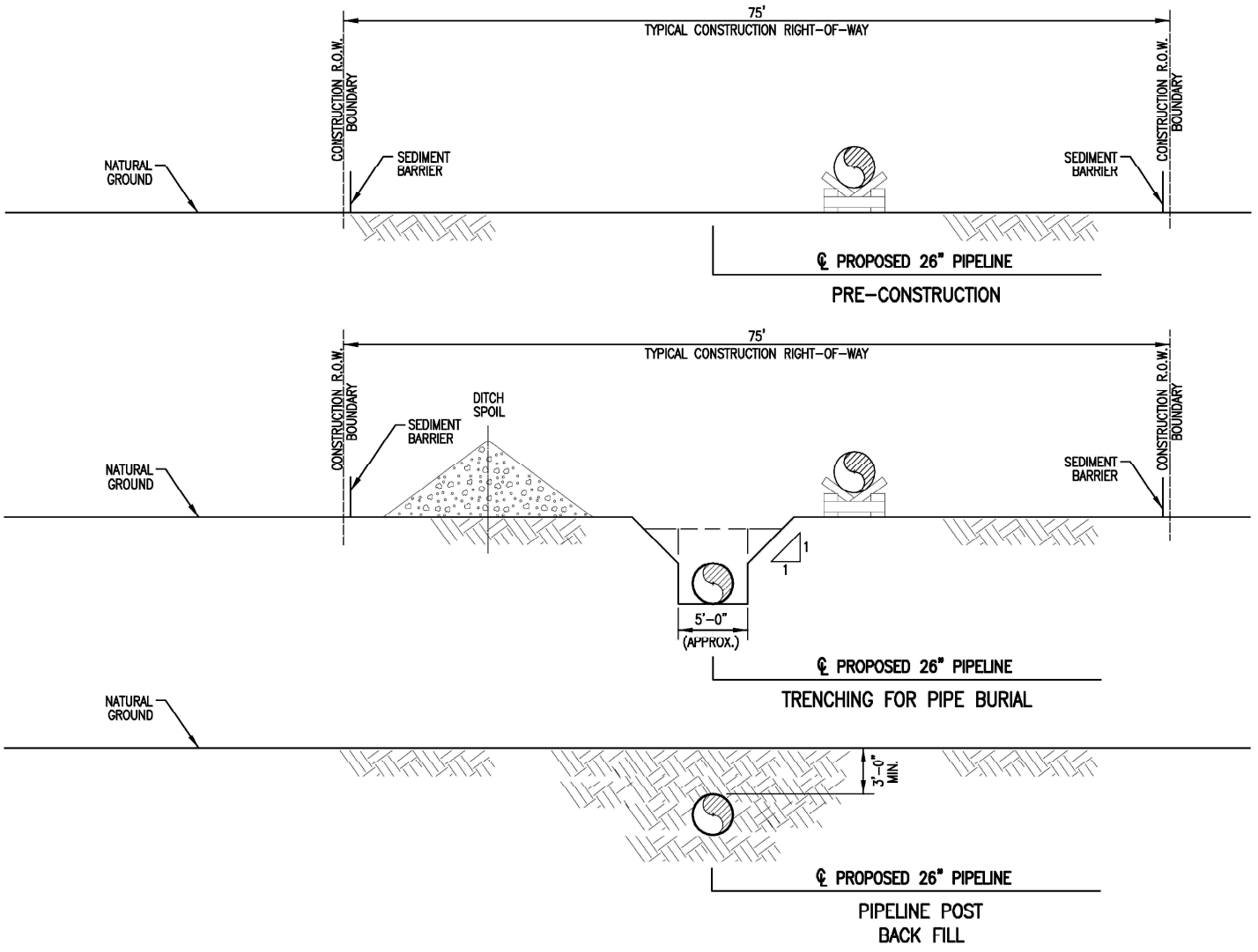


Figure 2.3.1-11
Rockaway Delivery Lateral
and Northeast Connector Projects
Typical Onshore Construction Right-of-Way
for the Rockaway Delivery Lateral

2.3.1.12 Cleanup and Restoration

Any construction debris and temporary fencing that is installed at the HDD entry location would be removed after the onshore portion of the pipeline is backfilled. The affected land would then be graded to restore contours and seeded in accordance with the landowner agreement. Any permanent erosion and sediment control measures that are needed would be installed at this time.

2.3.2 M&R Facility Construction Procedures

The proposed M&R facility would be constructed in the southernmost historic airplane hangars at Floyd Bennett Field, designated as Hangars 1 and 2, in accordance with applicable New York City building codes utilizing materials, fixtures, and operational systems approved by the NPS, FERC, and New York SHPO. Construction of the M&R facility would occur during daylight hours and would consist primarily of construction/modifications to the existing hangars.

Construction activities would occur within the roughly 1.1-acre footprint of the hangar complex. The hangar modifications and preparations for the new equipment and piping would include: pile driving to install sheeting into the ground outside the buildings to support the hangar walls; removing most of the existing concrete floors and replacing them with new concrete flooring or foundations, concrete pads, or crushed stone; excavating trenches inside the hangars for new piping and equipment foundations; pile driving to install piles under the equipment, piping, and headers to be placed inside the buildings; installing the piping and equipment; restoring the exterior of the hangars; and replacing a missing roof on the structures. In total, approximately 6,115 cubic yards of spoil would be excavated from within the hangar complex to install the piping and equipment.

There would be some temporary surface disturbance within a 0.9-acre area outside the hangar buildings during installation of the inlet and outlet pipes. Approximately 1,400 cubic feet of material would be excavated for the trenches for the inlet and outlet pipes that would connect the M&R facility to National Grid's pipeline along Flatbush Avenue. After the pipes are installed, the trenches would be backfilled with the excavated soil and the surface would be restored using the original paving stones or, where the original paving stones cannot be used, with new paving stones that are similar to the original stones.

Transco would use municipal water obtained from a hydrant or another municipal source to hydrostatically test the pipes and other equipment at the M&R facility. This testing would be conducted according to the same procedures and requirements as those described above for the pipeline, although no chemicals would be added to the water. Following completion of the testing, the water would be discharged into a nearby existing stormwater drain system as permitted by the NYSDEC.

2.3.3 Compressor Station Construction Procedures

Construction at Compressor Stations 205 and 207 would involve the use of hand tools to replace/adjust equipment within the existing compressor buildings at these sites; no ground disturbing activities would occur at these sites. Construction at Compressor Station 195 would require modifications to equipment within the existing compressor building as well as installation of new facilities. Up to 25.2 acres, all within the existing station yard, would be disturbed for construction of the new facilities as well as for temporary workspace. Activities at the site would include: staking of construction workspace and marking of existing utilities within the station yard; installation of temporary erosion controls to prevent runoff from disturbed areas and stockpiled spoil; removal of vegetation and grading, where necessary, to create a level work surface and prepare foundation sites for the new facilities; removal of three existing natural gas-fired reciprocating engines and appurtenant facilities and installation of two new electric

motor drives within the existing compressor building; installation of new facilities on prepared foundations at the site; welding of components in accordance with API standards; backfilling and restoration of contours in work areas that do not include new permanent facilities; revegetation of disturbed areas; and removal of construction debris from the site.

Piping at Compressor Station 195 would be hydrostatically tested using water from an onsite potable water well. The testing would be conducted using the same procedures as those described above for the Rockaway Delivery Lateral. The water would be discharged within the station site in accordance with applicable state permits. Hydrostatic testing would not be required for the proposed modifications at Compressor Stations 205 and 207.

2.4 CONSTRUCTION WORKFORCE AND SCHEDULE

For the Rockaway Project, construction of the M&R facility would be completed over a 14 month period (six months to install equipment and up to 14 months for rehabilitation of the hangars) and construction of the pipeline would be completed over a six month period beginning in spring of 2014. Transco expects to use 130 or more construction workers for the offshore construction, and 45 construction workers for the onshore construction. Of this total, Transco expects that approximately 85 percent, or roughly 110 of the offshore workers and 40 of the onshore workers, would be local hires (i.e., individuals already residing in the New York metropolitan area). Most of the estimated 25 non-local workers would be engaged in offshore construction activities and would live on an offshore vessel or in temporary housing in the vicinity of the Rockaway Project.

For the Northeast Connector Project, construction activities at Compressor Station 195 would be completed over a nine month period and construction activities at Compressor Stations 205 and 207 each would be completed over a two month period beginning in the spring of 2014. Transco expects to use approximately 60 workers for construction, including 50 workers at Compressor Station 195 and 5 workers each at Compressor Stations 205 and 207. Transco estimates that up to one-third of the workforce at Compressor Station 195, or about 20 workers, would be local hires. All other workers would be non-local hires who would lodge in temporary housing in the vicinity of the compressor station sites.

2.5 ENVIRONMENTAL TRAINING, INSPECTION AND COMPLIANCE MONITORING

Transco provides annual training for its Environmental Inspectors (EIs) and other company construction personnel in the implementation of its Plan and Procedures and other mitigation measures. The EIs for the Projects would be drawn from Transco's inspector pool or possibly from qualified contractors. Transco would train the field construction personnel and construction contractor's personnel before and during construction of the Projects. While this training would focus on implementation of Transco's Plan and Procedures for the Rockaway Project and the FERC Plan for the Northeast Connector Project, as appropriate, it would also include instruction on permit conditions and requirements as well as the implementation of other mitigation measures, as appropriate.

For purposes of quality assurance and compliance with mitigation measures, applicable regulatory requirements, and Transco specifications, Transco would be represented on the construction spread for the Rockaway Project by a Chief Inspector. The Chief Inspector would be assisted by one or more Craft Inspectors and at least one EI. The EI position would be a full-time position. The EI would report directly to Transco's Chief Inspector and would have stop-work authority. The duties of the EI would be consistent with those identified in the FERC Plan and would include ensuring compliance with environmental conditions from the FERC Certificate, Transco's environmental designs and specifications, and other permits or authorizations. An adequate number of copies of the construction drawing package

would be distributed to Transco's inspectors and to the contractor's supervisory personnel. If the contractor's performance is unsatisfactory, the terms of the contract would allow Transco to stop work in progress and require the contractor to begin remedial work.

Any issues of environmental non-compliance that cannot be solved in the field would be addressed by Transco's Construction Manager, who would be assigned to the Rockaway Project from Transco's engineering and construction department. If technical or management assistance is required, construction headquarters staff would request assistance from the appropriate Transco department or division. Routine reporting or specific communication with the FERC staff regarding design, installation, and maintenance of the facilities described in the EIS would be the responsibility of Transco's natural resources department. Transco's operations department would be responsible for long-term Rockaway Project maintenance and regulatory compliance.

For the Northeast Connector Project, Transco would deploy an EI for the duration of construction activities at Compressor Station 195 to ensure that erosion and sediment controls are properly deployed and maintained in accordance with the FERC Plan. If additional controls are required during construction to manage sediment and runoff, the EI would have the authority to ensure that they are installed as and where needed. Following construction, the effectiveness of erosion control devices and the success of revegetation would be monitored by Transco's operations department.

In addition to Transco's environmental inspection program, we would conduct regular, typically monthly, inspections of construction activities associated with the Projects and post summary reports from the inspections into the dockets. As appropriate, we would coordinate our inspections with other agencies.

2.5.1 Post-Approval Variance Process

The pipeline alignment and work areas identified in the EIS should be sufficient for construction and operation (including maintenance) of the Projects. Minor route realignments and other workspace refinements sometimes continue past the project-planning phase and into the construction phase. As a result, the project locations and areas of disturbance described in this EIS may require refinement after approval of the Projects (assuming the Projects are approved). These changes could involve minor route realignments for the Rockaway Delivery Lateral, shifting or adding new temporary workspace or staging areas, or adding additional access roads.

We have developed a procedure for assessing impacts on those areas that have not been evaluated in the EIS and for approving or denying their use. For the Rockaway Project, biological and cultural resources surveys were conducted using a survey corridor larger than that necessary to construct the facilities. If Transco proposes to modify the configuration of workspace or add new workspace subsequent to any Rockaway Project approval, these areas typically would be within the previously surveyed area. For the Northeast Connector Project, any changes in workspace configuration at Compressor Station 195 most likely would be within previously disturbed areas within the existing station yard.

The request for route realignments or additional temporary workspace (ATWS) locations along with a copy of the survey results and/or documentation of consultations with the appropriate resource agency would be documented and forwarded to the FERC in the form of a "variance request." Typically, no further consultation with resource agencies would be required if the requested change is within previously surveyed or otherwise cleared areas and no sensitive environmental resources or managed areas are affected. The procedures used for assessing impacts from proposed workspace outside surveyed areas and for approving their use are similar to those described in this EIS. Additional surveys, analyses,

and resource agency consultations would be performed, as necessary, to ensure that impacts on biological, cultural, and other sensitive resources would be avoided or minimized to the maximum extent practicable. After Transco completes any required surveys, analyses, and consultations, the required documentation would be forwarded to the FERC for evaluation. Such requests would require review and written approval by the Director of the Office of Energy Projects (OEP).

2.6 OPERATION, MAINTENANCE, AND EMERGENCY RESPONSE

Transco would operate and maintain the Projects in compliance with DOT regulations provided in 49 CFR 192, the FERC guidance in 18 CFR 380.15, and the maintenance provisions of Transco's Plan and Procedures and FERC's Plan and Procedures. Operation and maintenance considerations for the proposed facilities are described below.

2.6.1 Pipeline Facilities

Operational activity on the Rockaway Delivery Lateral would include maintaining, inspecting, cleaning, and (as necessary) repairing the pipeline. Onshore, periodic ground inspections by pipeline personnel would identify soil/sediment erosion that may expose the pipe, dead vegetation that may indicate a leak in the line, conditions of the vegetative cover, unauthorized encroachment on the pipeline (e.g., buildings and other substantial structures), and other conditions that could present a safety hazard or require preventive maintenance or repairs. Responses to conditions observed during inspection would be taken, as necessary, in accordance with the appropriate approved plan, regulatory requirement, FERC certificate condition, and/or permit condition. Because of the depth of the pipeline where it is installed by the HDD method as well as NPS ownership of the land, Transco does not propose to maintain the ground surface above the pipeline, but Transco would coordinate closely with the NPS to ensure safe operating conditions.

The proposed pipeline would be designed and constructed to accommodate inspection using in-line inspection tools known as pigs. The existing 26-inch-diameter LNYBL pipeline was inspected with a pig in 2012 with no issues identified. The subsea hot-tap fittings would be designed to ensure the existing pipeline can still be inspected using a pig. Within 10 years of being placed into service, and every 7 years thereafter, the proposed pipeline would be inspected with a pig in accordance with 49 CFR 192.

The onshore portion of the pipeline facilities would be marked at key points. The markers would clearly indicate the presence of the pipeline, call out the words "Natural Gas," and provide a telephone number and address where a company representative may be reached in the event of an emergency or before any excavation in the area of the pipeline by a third party. Additionally, Transco participates in all One-Call systems.

Typically, HDD installations are not marked because they extend far below the excavation depths for other normal construction activities and/or are in sensitive environmental areas. For the Rockaway Project, flush-mounted reflective plastic plate markers would be placed at a few select curb or existing pavement locations along the upland portion of the HDD route through Jacob Riis Park, including a location near the HDD entry point where the pipeline would be at a shallower depth. Typical post-style pipeline markers would not be installed on NPS land.

The USACE has advised Transco that it would require the placement of a sign no smaller than 4-feet by 4-feet containing language regarding the location of the pipeline at the shoreline crossing as a condition to any permit it may issue for the Rockaway Project. Transco would work with the USACE and NPS to confirm the requirements for the sign and select a design, size, and location that is acceptable to both agencies.

2.6.2 Aboveground Facilities

Transco would operate and maintain the M&R facility and Compressor Stations 195, 205, and 207 in accordance with DOT regulations at 49 CFR 192. Transco personnel would routinely visit these facilities for the purpose of calibrating equipment and instrumentation, inspecting critical components, and performing scheduled and routine maintenance of equipment and grounds. Corrective actions would be taken, as necessary, if problems are identified.

2.7 FUTURE PLANS AND ABANDONMENT

Transco has not identified any plans to expand or abandon the proposed facilities. Any plans to expand the proposed facilities would be subject to approval by the FERC under Section 7(c) of the NGA. If, for some reason, Transco is required to abandon any of the facilities in the future, the abandonment would be subject to approval by the FERC under Section 7(b) of the NGA. For the portions of the Rockaway Project on GNRA lands, abandonment additionally would be subject to the terms of the easement/lease agreements between the NPS and Transco.

We received comments during project scoping from the public and NPS regarding the construction of offshore liquefied natural gas (LNG) facilities in association with the Rockaway Project. Transco is not proposing to construct LNG facilities as part of either the Rockaway or Northeast Connector Projects. Any future plans to construct offshore LNG facilities would be subject to the approval of the Commission under Section 3 of the NGA and the DOT's Maritime Administration (MARAD) under the Deepwater Port Act of 1974 (DWPA). A discussion of cumulative impacts resulting from construction of reasonably foreseeable projects, including a proposal for an unrelated LNG terminal, is provided in Section 4.13.